



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105

September 25, 2009

MCAQD

OCT 01 2009

Office of the Director

Lawrence Odle  
Director  
Maricopa County Air Quality Department  
1001 North Central Avenue, Suite #500  
Phoenix, AZ 85004

Subject: **Concurrence on Alternative Moisture Content Requirement for Hot Mix Asphalt Plants**

Dear Mr. Odle:

Section 301.2(c) of the March 12, 2008 version of Maricopa County Air Quality Department (MCAQD) Rule 316 requires facilities to operate watering systems to continuously maintain a 4% minimum moisture content. Section 301.2(c)(4) of the Rule allows owners and operators to request an alternative minimum moisture content other than 4% with justifying documentation that includes data about economic and technical feasibility, water availability, and emission rates. Section 301.2(c)(4) also specifies that MCAQD and EPA need to approve the request before the lower moisture content can be implemented. We have received your July 30, 2009 email that includes a May 18, 2009 analysis from the Arizona Rock Products Association (ARPA) requesting an alternative minimum moisture content at hot mix asphalt facilities and MCAQD's July 6, 2009 response to ARPA's analysis.

ARPA states that meeting the required 4% moisture content at hot mix asphalt facilities results in increased fuel usage in the drum dryers since more heat and run-time is needed to evaporate moisture out of the feed products. ARPA provides an analysis to show that the additional fuel usage can result in increases in combustion generated emissions as well as increases in fuel costs. ARPA requests that hot mix asphalt plants be allowed to comply with a minimum moisture content of 2.5% for unwashed feed products and 2% for washed feed products since washed feed product contains a lesser fraction of fine particulate matter.

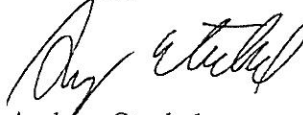
After assessing ARPA's analysis, MCAQD recommends approval of these alternative minimum moisture contents for screens in the process line directly feeding a hot mix asphalt facility subject to the limitations in Section 301.2(c) of Rule 316. MCAQD's analysis shows that increasing moisture content from 2.5% to 4% increases net PM-10 emissions at hot mix asphalt facilities employing used/waste oil. MCAQD states that the majority of hot mix asphalt facilities under a department permit consume used/waste oil. Also, MCAQD concludes that it is not economically feasible to reduce PM-10 emissions from facilities that use natural gas or No. 2 diesel as combustion fuels by increasing moisture content from 2.5% to 4%. Per MCAQD's calculations, it would take \$522,030 to reduce one ton of PM-10 emissions from hot mix asphalt

facilities that used natural gas, and \$1,194,773 to reduce one ton of PM-10 emissions from hot mix asphalt facilities that used No. 2 diesel.

Based on MCAQD's analysis, we agree that it is appropriate for hot mix asphalt plants in Maricopa County to maintain either a 2.5% moisture content for unwashed feed products or 2% moisture content for washed feed products. We also agree with MCAQD that it is appropriate to use a method for assessing the control efficiencies of different moisture contents that does not assume that 4% moisture represents 100% control. The methodology used by MCAQD to generate the figures in Table 1, Moisture Content of Feed Materials Correlated to Control Efficiency, is acceptable. We believe that using the data in Table 1 of the AP-42 background document for Section 11.19.2 to extrapolate a function that correlates emission factors with different moisture contents would yield control efficiencies similar to those in Table 1.<sup>a</sup>

If you have any questions about our determination, please do not hesitate to contact Sona Chilingaryan of my staff at (415) 972-3368 or John Brock in our Enforcement Office at (415) 972-3999.

Sincerely,



Andrew Steckel  
Chief, Rules Office

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<sup>a</sup> The background document for Section 11.19.2 can be found at:  
<http://www.epa.gov/ttn/chief/ap42/ch11/bgdocs/b11s1902.pdf>